Catalyst for synthesizing methane thiol from synthetic gas containing high-concentration hydrogen sulfide

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Abstract of **CN1528516**

The invention relates to a catalyst to use synthetical gas containing high concentration H2S as raw material to synthesize methane thiol by one-step method, composed of carrier, active component and active accelerant, where the carrier selects SiO2, TiO2 or heavy rare earth oxide; the active component is Mo-O-K based compound, converted by the fore body K2MoO4 or (NH4)6Mo7O24 plus sylvine or MoO3 plus sylvine; the active accelerant is mainly transition metal like Mn, Fe, Co, Ni, Ce, La, etc, or rare earth oxide; it makes catalysis reaction at 295 deg.C and 0.2 Mpa in the volume ratio of the raw material gases CL/H2/H2S=1/2/(0.1-1) at an airspeed of (1-5) x ten to the power 3 h-1, showing high activity and selectivity, the methane thiol's time-space catching rate is up to 0.18-0.25g.h-1. ml-1cat, and the methane thiol's selectivity is 93.5%-98.8%.